

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000456**Date Inspected:** 16-Sep-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 2330**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 800**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Lu Jian Ping & Hou Jing Tao			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A

Bridge No: 34-0006**Component:** Caltrans Mock-Up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up, 77M, 89M and 114M, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Item	Description	WBS	Dwg No.	Status
1	Skin Plate A	NA	NA	Work In Progress
	Mock-Up 114M, Skin Plate A (upper): Caltrans QA Inspector observed flux cored arc welding (FCAW) in progress. The welder is observed welding stiffener plate to skin plate complete joint penetration (CJP) fill pass welds in the horizontal position. Caltrans QA observed welder chipping and wire brushing during interpass weld cleaning. The weld number is identified as weld 3, piecemark mp1002 to MA106. The approved welder is identified as Mr. Jiang Zhou, welder stamp #040261. The welder is using welding procedure specification WPS-B-T2232-TC-U5-F, Revision 1. Caltrans QA observed ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Lu Jing Ping and Bureau Veritas inspector, Mr. Hou Jing Yao monitoring welding activities at the workstation. Caltrans QA Inspector measured current welding parameters at approximately 305 amps, 29 volts and 300 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. FCAW welding consumable is verified and identified as Supercored 71H, classification E71T-1, diameter 1.4 mm (.055 inches).			
2	Skin Plate C	NA	NA	Work In Progress
	Mock-Up 114M, Skin Plate C (lower): Caltrans QA Inspector observed flux cored arc welding (FCAW) in progress at stiffener plate, mp1012 to skin plate MA111. The weld number is identified weld 8, complete joint penetration (CJP).			

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The welders are observed welding fill pass weld in the horizontal position. Caltrans QA observed welders chipping and wire brushing during interpass weld cleaning. The welders are identified as Mr. Jiang Zhou, welder stamp 040261 and Mr. Bai Wenming, welder stamp 040434. The welders are using welding procedure specification WPS-B-T-2232-TC-U5-F, Revision 1 and WPS-B-T-2332-TC-P5-F, Revision 0. Caltrans QA observed ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Lu Jian Ping and Bureau Veritas inspector, Mr. Hou Jing Yao monitoring welding activities at the workstation. Caltrans QA measured current welding parameters at approximately 310 amps, 31 volts and 300 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. FCAW welding consumable is verified and identified as Supercored 71H, classification E71T-1, diameter 1.4 mm (.055 inches).

Prior to the welding of the CJP weld number 5. Caltrans QA Inspector observed air carbon arc backgouge material preparation. The locations are identified as stiffener plate mp1012 to skin plate MA111. The backgouge material prep was inspected for compliance by ZPMC QC/CWI inspector, Mr. Lu Jian Ping and accepted for conformance. The backgouge surface appeared to be smooth, ground to bright metal and bevel profiled. Following digital picture illustrates backgouge material preparation and completed weld at stiffener mp1012 to skin plate MA111.



Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Hasler, Mike	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
